Page 1

STATE OF NEW MEXICO

ENERGY, MINERALS, AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

IN THE MATTTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

> CASES NOS. 16219 16220

Application of COG Operating, LLC, for a non-standard oil spacing and proration unit and compursory pooling, Lea County, New Mexico.

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

THURSDAY, JULY 26, 2018

SANTA FE, NEW MEXICO

This matter came on for hearing before the New Mexico Oil Conservation Division, William B. Jones, Examiner, and David Brooks, Esq., Legal Examiner, on Thursday, July 26, 2018, at the New Mexico Energy, Minerals, and Natural Resources Department, Wendell Chino Building, 1220 South St. Francis Drive, Porter Hall, Room 102, Santa Fe, New Mexico

Reported by: Mary Therese Macfarlane New Mexico CCR 122 PAUL BACA COURT REPORTERS 500 Fourth Street NW, Suite 105 Albuquerque, New Mexico 87187

Page 2 APPEARANCES. 1 2 FOR THE APPLICANT Julia Broggi, Esq. 3 COG OPERATING, LLC: Holland & Hart 110 North Guadalupe, Suite 1 Santa Fe, New Mexico 87501 4 (505) 988-4421 5 jbroggi@hollandhart.com 6 FOR MARATHON PERMIAN, LLC Jennifer L. Bradfute, Esq. Modrall Sperling 7 P.O Box 2168 Albuquerque, NM 8 (505) 848-1845 jb@modrall.com. 9 FOR BURLINGTON RESOURCES James Bruce, Esq. 10 OIL AND GAS Post Office Box 1056 and Santa Fe, NM 87504 (505) 982-2043 11 ENERGEN RESOURCES CORP. jamesbruc@aol.com and 12 MATADOR RESOURCES 13 INDEX 14 CASES NOS. 16219 and 16220 CALLED PAGE 15 APPLICANT'S WITNESSES: 4 16 MATTHEW SOLOMON Examination by Ms. Broggi: 7 17 Cross Examination By Ms. Bradfute: 19 Cross Examination By Mr. Bruce: 21 18 Cross Examination By Mr. Jones: 22 26 19 Cross Examination By MR. Brooks: 20 HENRY ZOLLINGER 21 Examination by Ms. Broggi: 30 34 22 Cross Examination By Ms. Bradfute: Cross Examination By Mr. Bruce: 34, 41 36, 41 23 Cross Examination By Mr. JONES: 24 25

|    |  |    | Page 3 |
|----|--|----|--------|
| 1  | EXHIBIT INDEX                            |    |        |
| 2  | EXHIBIT:                                 |    | PAGE   |
| 3  | APPLICANT COG OPERATING, LLC, EXHIBIT 1  | 19 |        |
| 4  | APPLICANT COG OPERATING, LLC, EXHIBIT 2  | 19 |        |
| 5  | APPLICANT COG OPERATING, LLC, EXHIBIT 3  | 19 |        |
| 6  | APPLICANT COG OPERATING, LLC, EXHIBIT 4  | 19 |        |
| 7  | APPLICANT COG OPERATING, LLC, EXHIBIT 5  | 19 |        |
| 8  | APPLICANT COG OPERATING, LLC, EXHIBIT 6  | 19 |        |
| 9  | APPLICANT COG OPERATING, LLC, EXHIBIT 7  | 19 |        |
| 10 | APPLICANT COG OPERATING, LLC, EXHIBIT 8  | 19 |        |
| 11 | APPLICANT COG OPERATING, LLC, EXHIBIT 9  | 19 |        |
| 12 | APPLICANT COG OPERATING, LLC, EXHIBIT 10 |    | 19     |
| 13 | APPLICANT COG OPERATING, LLC, EXHIBIT 11 |    | 19     |
| 14 | APPLICANT COG OPERATING, LLC, EXHIBIT 12 |    | 19     |
| 15 | APPLICANT COG OPERATING, LLC, EXHIBIT 13 |    | 19     |
| 16 | APPLICANT COG OPERATING, LLC, EXHIBIT 14 |    | 19     |
| 17 | APPLICANT COG OPERATING, LLC, EXHIBIT 15 |    | 19     |
| 18 | APPLICANT COG OPERATING, LLC, EXHIBIT 16 |    | 19     |
| 19 | APPLICANT COG OPERATING, LLC, EXHIBIT 17 |    | 19     |
| 20 | APPLICANT COG OPERATING, LLC, EXHIBIT 18 |    | 19     |
| 21 | APPLICANT COG OPERATING, LLC, EXHIBIT 19 |    | 19     |
| 22 | APPLICANT COG OPERATING, LLC, EXHIBIT 20 |    | 19     |
| 23 | APPLICANT COG OPERATING, LLC, EXHIBIT 21 |    | 19     |
| 24 | APPLICANT COG OPERATING, LLC, EXHIBIT 22 |    | 19     |
| 25 | APPLICANT COG OPERATING, LLC, EXHIBIT 23 |    | 19     |
|    |  |    |        |

|    |           |     |            |      |         |    | Page 4 |
|----|-----------|-----|------------|------|---------|----|--------|
| 1  | APPLICANT | COG | OPERATING, | LLC, | EXHIBIT | 24 | 19     |
| 2  | APPLICANT | COG | OPERATING, | LLC, | EXHIBIT | 25 | 19     |
| 3  | APPLICANT | COG | OPERATING, | LLC, | EXHIBIT | 26 | 33     |
| 4  | APPLICANT | COG | OPERATING, | LLC, | EXHIBIT | 27 | 33     |
| 5  | APPLICANT | COG | OPERATING, | LLC, | EXHIBIT | 28 | 33     |
| 6  | APPLICANT | COG | OPERATING, | LLC, | EXHIBIT | 29 |        |
| 7  |           |     |            |      |         |    |        |
| 8  |           |     |            |      |         |    |        |
| 9  |           |     |            |      |         |    |        |
| 10 |           |     |            |      |         |    |        |
| 11 |           |     |            |      |         |    |        |
| 12 |           |     |            |      |         |    |        |
| 13 |           |     |            |      |         |    |        |
| 14 |           |     |            |      |         |    |        |
| 15 |           |     |            |      |         |    |        |
| 16 |           |     |            |      |         |    |        |
| 17 |           |     |            |      |         |    |        |
| 18 |           |     |            |      |         |    |        |
| 19 |           |     |            |      |         |    |        |
| 20 |           |     |            |      |         |    |        |
| 21 |           |     |            |      |         |    |        |
| 22 |           |     |            |      |         |    |        |
| 23 |           |     |            |      |         |    |        |
| 24 |           |     |            |      |         |    |        |
| 25 |           |     |            |      |         |    |        |
|    |           |     |            |      |         |    |        |

Page 5 MR. JONES: Okay. Skipping to page 15 and 1 calling Cases 16219 and 16220, these are applications of 2 COG Operating, LLC, for a non-standard spacing and 3 4 proration unit, and compulsory pooling in Lea County, New 5 Mexico. 6 Call for appearances in one or both cases. 7 MS. BROGGI: Julia Broggi with Holland and Hart 8 on behalf of the Applicant COG Operators, LLC. And we 9 have two witnesses. 10 MR. JONES: Other appearances? MS. BRADFUTE: Mr. Examiner, Jennifer Bradfute 11 12 on behalf of Marathon Permian, LLC, in both cases. 13 MR. JONES: Other appearances? 14 MR. BRUCE: Mr. Examiner, Jim Bruce representing 15 Burlington Resources Oil and Gas Company, LP, and Energen Resources Corporation in both cases. 16 17 MR. JONES: Okay. Does everyone have their paperwork in on this, because the paperwork has been kind 18 of shuffled around OCD, so we are trying to get that 19 straight. I apologize for that. 20 21 MR. BRUCE: I did not get the written entry of 22 appearance. MS. BRADFUTE: Matador Resource sent an email 23 24 this morning asking that somebody put on the record that 25 they filed an entry.

Page 6 1 MR. JONES: We got that. 2 MS. BRADFUTE: So I just want to state on the 3 record they filed an entry but I do not represent Matador. 4 MR. JONES: Okay. We've got Matador. Is 5 anybody representing Matador here? MR. BRUCE: Why don't I volunteer? 6 7 MR. JONES: Okay. 8 MS. MUNDS-DRY: I'll do it. 9 MR. JONES: Ms. Bradfute, who do you represent? 10 MS. BRADFUTE: Marathon. MR. JONES: Marathon. Okay. Okay. So we've 11 12 got COG as the Applicant, we've got Marathon, and we've we 13 got Burlington. And what was the other one? 14 MR. BRUCE: Energen. 15 MR. JONES: Energen. And we got Matador. So we got attorneys all starting with the 16 17 name J, or the letter J. MR. BRUCE: Probably should put \*\* Matador as 18 MRC Permian. 19 20 MR. JONES: Instead of Matador, MRC. Okay. 21 Does COG agree to allow the late entries to 22 ask questions of a witness? MS. BROGGI: Yes, Mr. Examiner. 23 24 MR. JONES: Okay. Will the witnesses in these 25 cases please stand.

Page 7 Oh, the witnesses have been previously 1 sworn. Let the record show that the witnesses have been 2 previously sworn. Let the record show the witnesses' 3 names are -- Matt, say your name. 4 5 MR. SOLOMON: Matt Solomon. MR. ZOLLINGER: Henry Zollinger. 6 7 MR. JONES: Mr. short-timer here. They have 8 been previously sworn and qualified. As long as that's 9 okay with the other attorneys. MS. BRADFUTE: No objection. 10 11 (Note: No additional response.) 12 MS. BROGGI: So just to revisit the question 13 about whether or not we need to request a non-standard spacing proration unit, this one was filed in May, so 14 would it be your position that we still need it? 15 16 MR. JONES: Yes. 17 MS. BROGGI: No question that... 18 MR. JONES: Uh-huh. 19 MS. BROGGI: Okay. Do you understand? 20 THE WITNESS: Uh-huh. 21 MATT SOLOMON, 22 having been previously sworn and qualified, testififed as follows: 23 24 EXAMINATION 25 BY MS. BROGGI:

|    | Page 8   |
|----|--|
| 1  | Q. So, Mr. Solomon, it sound like you have already         |
| 2  | been established as an expert witness in this case.        |
| 3  | You're familiar with the Application that COG filed in     |
| 4  | this case?   |
| 5  | A. Iam.  |
| 6  | Q. And the lands at issue?                                 |
| 7  | A. Yes.  |
| 8  | Q. Will you please turn let me start with the              |
| 9  | first case. This is Case No. 16219. Can you tell the       |
| 10 | examiners what COG is seeking with this application.       |
| 11 | A. This is   |
| 12 | Q. The first case.   |
| 13 | A. Okay. East half of west half?                           |
| 14 | Q. Yes.  |
| 15 | A. We are seeking to force pool uncommitted working        |
| 16 | interest owners and overriding royalty interest owners     |
| 17 | into a 320-acre proration unit that is defined by the east |
| 18 | half of the west half of Section 30 and the east half of   |
| 19 | the west half of Section 31, Township 24 South, Range 35   |
| 20 | East, Lea County.  |
| 21 | Q. And you are requesting approval for a                   |
| 22 | non-standard spacing proration unit?                       |
| 23 | A. Correct.  |
| 24 | Q. And are you seeking to dedicate this spacing            |
| 25 | unit to the proposed Fascinator Federal Com Nos. 601H,     |
|    |  |

Page 9 1 602H, 701H, 702H and 703H wells? 2 Α. We are. 3 Are you seeking to pool all uncommitied owners 0. 4 in the Wolfcamp pool? 5 Α. Yes. Correct. And designate COG as the operator? 6 Q. 7 Α. Correct. 8 With respect to the second case, 16220, will 0. tell us what COG is seeking with that application. 9 10 Α. Yes. We are seeking to compulsory pool a proration unit comprised of the west half of the west half 11 12 of Section 30 and the west half of the west half of 13 Section 31 for uncommitted working interest owners and 14 overriding royalty interest owners. 15 Q. And again that would be a non-standard spacing proration unit? 16 17 Α. Correct. 18 Are you proposing to dedicate the spacing unit Q. 19 to Fascinator Fed Com Nos. 603H, 604H, 704H, 705H, 706H 20 wells? 21 Α. We are. 22 And the pooling of the uncommmitted interest 0. 23 owners? 24 Α. Correct. 25 Q. As well as COG as the operator?

Page 10 1 Α. Correct. 2 Has COG filed C-102 well plots for each of the Q. 3 10 proposed wells in these cases? 4 Α. It has. 5 And is that what has been marked as COG Exhibits 0. 6 1 through 10? 7 (Note: Pause.) That's correct. Α. 8 So there is one for each of the proposed wells? 0. 9 Yes, there is. Α. 10 Have they been assigned a pool code? Q. 11 They have not been assigned a pool code yet, but Α. 12 we are -- we know which pool we want to put that in. 13 Q. And is that going to be CWC-025-09S2435321? 14 Α. That is the requirement. 15 ο. What is the nature of the land? 16 It's made up of three things: fee leases, Α. federal leases, and a state lease. 17 18 Q. Will you please turn to COG Exhibit No. 11 in 19 the notebook. 20 Uh-huh. Α. 21 Q. Does this exhibit identify the tracts involved 22 in the first case No. 16219? It does. 23 Α. 24 And on the second page of that Exhibit 11, does Q. 25 it show the ownership by tract?

Page 11 It does. 1 Α. 2 Q. And then the third page is the unit recapitulation? 3 4 Α. Uh-huh. 5 What is the significance of the bolded names on 0. 6 that list on the third page? 7 Α. Those are currently uncommitted working interest 8 owners. 9 And the parties that you're seeking to pool in Q. 10 this case? 11 A. Correct. 12 Let's turn to COG Exhibit No. 12. Q. 13 Α. Let me add something else. 14 0. Sure. 15 Α. The names at the bottom bolded where you see the estate of, those are unmarketable title owners we are also 16 17 seeking to pool. 18 Q. Thank you for the clarification. 19 Please turn to the next exhibit, Exhibit 20 No. 12. 21 Α. Uh-huh. 22 Same thing. Does this show the tracts involved 0. in Case No. 16220? 23 24 Α. It does. 25 Does the second page so the ownership by tract? 0.

Page 12 It does. 1 Α. 2 And that third page is the unit recapitalization Q. 3 page? 4 Α. Correct. 5 Those bolded names are the parties that COG is 0. 6 seeking to pool in that case? 7 That's correct. Α. 8 0. Let me ask you about setbacks. 9 For the proposed wells, Fascinator Fed Com 10 Nos. 601H, 603H, 604H, 701H, 702H, 705H, 706H, will the 11 completed intervals comply with the standard setback 12 requirements? 13 Α. Those wells will comply. 14 And for the remaining three wells with 0. 15 Fascinator Fed. Com Nos. 602H, 703H and 704H, will they comply? 16 They will not comply and will require a 17 Α. specialty exception that we've applied for through the 18 standard administrative procedure. 19 So you have separately applied for that 20 Q. 21 administratively? 22 Correct. Α. What type of interests is COG seeking to pool? 23 Q. 24 Α. Uncommitted working interest owners, overriding 25 royalty interest owners related to federal leases, and

Page 13 unmarketable title interest. 1 2 0. How about unleased interest owners? Α. 3 Yes. 4 Q. For the working interest owners, did COG send a 5 Well Proposal letter? 6 Α. Correct. 7 So please turn to COG Exhibit No. 13. Q. 8 Α. Uh-huh. 9 Is this a copy of the Well Proposal letter sent Q. 10 to the working interest owners for the proposed Fascinator 11 Fed Com 601H well? 12 Α. It is. 13 Q. And for the unleased mineral interest owners did 14 COG offer to lease the interest? Correct. We did. 15 Α. 16 In that same COG exhibit No. 13, will you turn 0. 17 two pages. 18 Α. Right. 19 0. Is that a copy of the letter that COG sent to 20 the unleased mineral interest owners? 21 Α. Correct. 22 Did both the letter that you sent to the working 0. 23 interest owners and the unleased mineral interest owners, 24 did they contain AFEs? 25 A. They did. It did.

Page 14 If you turn two pages, is that also included in 1 Q. 2 COG Exhibit No. 13? 3 Α. Correct. 4 Okay. Q. 5 Just to make the record real clear, will you Α. turn to COG Exhibit No. 14. 6 7 Uh-huh. Α. 8 Q. And is this, a letter that was sent to the 9 working interest owners, the letter that was sent to the 10 unleased mineral interest owners, and the AFE that 11 accompanied both of those letters, is that for proposed 12 well Fascinator Fed Com 602H? 13 Α. Correct. 14 0. And the same question for COG Exhibit No. 15. 15 Α. Okay. Got it. 16 ο. Is that the letter sent to the working interest 17 owners, unleased mineral interest owners, along with the 18 AFE for the proposed Fascinator Fed Com 603H well? 19 Α. It is. 20 I'm sorry to be tiresome about this, but will Q. 21 you also turn to COG Exhibit No. 16. 22 Are those the same two letters with 23 accompanying AFE for the proposed Fascinator Fed Com 604H 24 well? 25 Α. Yes.

Page 15 And if you will turn to COG Exhibit No. 17, are 1 Q. 2 those two letters with the accompanying AFE for the 3 proposed Fascinator Fed Com 701H well? 4 Α. Yes. 5 Same question as to COG Exhibit No. 18. Are 0. 6 those the two letters sent to working interest owners and 7 unleased mineral owners, along with accompanying AFE, for 8 the proposed Fascinator Fed Com 702H well? 9 Α. They are. 10 COG Exhibit No. 19, is that the same two letters Q. and an AFE for the Fascinator Fed Com 703H well? 11 12 Α. It is. 13 And if you will turn to the next exhibit, COG Q. 14 Exhibit No. 20. 15 Α. Uh-huh. Is this those same two letters to the working 16 0. 17 interest owners, unleased mineral interest owners, along 18 with the AFE for the proposed Fascinator Fed Com 704H 19 well? 20 It is. Α. 21 Q. And two more. COG Exhibit No. 21, is that a copy of the letter that was sent to the working interest 22 23 owners along with a letter sent to unleased mineral 24 interest owners and accompanying AFE for the proposed 25 Fascinator Fed Com 705H well?

Page 16 1 Α. Yes. 2 Very last one, COG Exhibit 22. Are those same Q. 3 two letters with the accompanying AFE for the proposed 4 Fascinator Fed Com 706H well? 5 Α. Yes. Regarding the AFEs that are part of COG Exhibits 6 Q. 7 13 through 22, are the costs in the AFE reflective and 8 consistent with what operators have incurred for drilling 9 similar horizontal wells in the area? 10 Α. They are. Has COG made an estimate of overhead and 11 0. 12 administrative costs while drilling and producing these 10 13 wells? 14 Α. It has. 7,000 for drilling, 700 for operations. 15 Q. Are those overhead rates consistent with what other operators charge for horizontal wells in this area? 16 17 Α. Yes. 18 Would you ask these administrative and overhead Q. 19 costs be incorporated into any Order that results from 20 this hearing? 21 Α. T do. 22 0. Let me ask you about -- you said there was also 23 overriding royalty interests. 24 Α. Uh-huh. 25 Were they provided notice of this hearing? 0.

Page 17 1 Α. They were. 2 And you also mentioned that there are Q. 3 unmarketable title owners in this case. 4 Α. Uh-huh. 5 What did you provide them? 0. 6 Α. Notice of the hearing and a corresponding letter 7 explaining the nature of the title issue. 8 0. And a copy of the Well Proposals? 9 Α. Correct. 10 What efforts did you undertake to reach Q. agreements with the parties that COG is seeking to pool in 11 12 this case? 13 Α. Well, for the uncommitted working interest 14 owners we sent out Well Proposals and Operating 15 Agreements, and for the overriding royalty interest owners, we sent them Ratifications -- well, not 16 ratifications. We sent them Communitization Agreements 17 with space for them to execute and notarize. 18 19 0. If after this hearing you are able to reach agreement with any of these parties that COG is seeking to 20 pool, will you let the Division know? 21 22 Α. Yes. 23 Q. Do you also believe you used good faith efforts 24 to try to reach agreement with them? 25 Α. Yes.

Page 18 Will you please turn to Exhibit No. 23 in your 1 Q. 2 notebook. Is this an affidavit from my office with a letter, the letter that was sent out to the interest 3 4 owners along with documentation of the mailing to those 5 interest owners? 6 Α. It is. 7 And in reviewing this document did you realize Q. 8 that one of the parties did not receive notice of this 9 hearing? 10 Α. Yes, that's correct. 11 0. And was that Jet Stream New Mexico MFTC, LLC? 12 Α. Correct. 13 Have you spoken to them about the notice issue? Q. 14 Α. Yes. We reached out to them last night asking them for a waiver of notice, and they sent us an 15 affirmative email today waiving Notice. 16 17 MR. JONES: Who was that again? MS. BROGGI: It's Jet Stream New Mexico MFTC, 18 They were the single party that didn't receive 19 LLC? Notice, but as Mr. Solomon testified, they have agreed to 20 waive the Notice issue. 21 22 Would you please turn to COG Exhibits Nos. 24 0. 23 and 25. 24 Α. Uh-huh. 25 Are these Affidavits of Publication in the Hobbs 0.

Page 19 1 News Sun for both of these two cases? 2 Α. They are. 3 Were Exhibits 1 through 25 either prepared by 0. 4 you or compiled under your direction and supervision? 5 Α. They were. MS. BROGGI: At this time we would move into 6 7 evidence COG's Exhibits 1 through 25. 8 MR. JONES: Objections? 9 MS. BRADFUTE: No objection. 10 MR. BRUCE: I object to the sheer volume, but other than that... 11 12 MR. BROOKS: I concur with you in that 13 objection. 14 MR. JONES: Exhibits 1 through 25 are admitted. 15 MS. BROGGI: I have no further questions for 16 this witness. MR. JONES: Ms. Bradfute? 17 18 MS. BRADFUTE: Sure. 19 I just have a couple of questions. 20 CROSS-EXAMINATION BY MS. BRADFUTE: 21 22 There are three wells that COG is going to apply 0. 23 for an NSL on; is that correct? 24 A. Uh-huh. 25 Q. That's 702, 703 and 704H?

Page 20 1 Α. That's correct. 2 And for all the other wells will their setbacks 0. 3 comply with the new horizontal rules or the previous 4 setback requirements? 5 I believe the answer is the previous setback Α. б requirements. 7 MS. BROGGI: I believe the answer is the 8 previous --9 MS. BRADFUTE: I just wanted to confirm and clarify. I just wasn't sure. 10 11 My next question is: Will all these wells be 0. 12 drilled within the same pool or are they all going to be 13 developing --14 The Wolfbone, yeah. Α. 15 ο. And it's all under the same pool code you 16 identified? 17 Α. Correct. 18 If you could turn to Exhibit 14. Exhibit 13. Q. 19 Exhibit 13. I want to look at the AFE. 20 Α. Uh-huh. 21 Q. Which is the third (sic) page of this exhibit. 22 Α. Okay. 23 The AFE up in the top caption area identifies Q. the TVD for the wells; is that correct? 24 25 Α. Uh-huh.

Page 21 1 That's true for all of the wells that have been 0. 2 proposed; is that correct? On your AFEs have 3 you identified a True Vertical Depth? I haven't looked closely at every single one, 4 Α. 5 but... But if you want to flip through I just want to 6 Q. 7 make sure I'm understanding it correctly. 8 Α. Okay. Yeah, it appears that, yes, there was a 9 TVD provided on every single one. 10 Is the TVD within -- it looks like the TVDs for 0. 11 all these wells were pretty similar. Is that accurate, 12 that you're targeting similar depths for all these wells? Yes. But I think that is a question probably 13 Α. best answered by our geology witness. 14 15 MS. BRADFUTE: Thank you. That concludes the 16 questions I have. MR. JONES: Mr. Bruce? 17 18 MR. BRUCE: Just one question. 19 CROSS-EXAMINATION 20 BY MR. BRUCE: 21 Will you continue to negotiate with the Q. 22 noncommitted interest owners after the hearing? 23 Α. Yes. 24 MR. BRUCE: Thank you. 25 CROSS-EXAMINATION

Page 22

1 BY MR. JONES:

2 Q. So you could end up with a situation where some 3 wells are owned by some parties and and some are owned by 4 others. In other words, they got to make elections for 5 each well, right? So then we'll -- in other words, some 6 people can elect in one well and not the other; is that 7 correct?

8 Α. You know, I don't know the answer to that. I am 9 not familiar with how the Commission wants to approach 10 something like that when we are doing batch drilling of five wells. Candidly, I don't know if you guys feel that 11 12 because of the process of batch drilling that somebody 13 either has to be all in or all out or if they should have 14 the option of saying, "Well, yeah, I like the first one, won't go on the third one, do the fourth one, pass on the 15 fifth one." I don't know what is considered to be -- to 16 balance the realities of batch drilling and yet fairness 17 to... 18

Q. Is any of these going to be -- the non-standard location applications, will they -- is it because they are going to encroach on the lateral acreages to the west or the east, or are they, because of the internal --

- A. Internal.
- 24 Q. Internal setback.
- 25 A. Right.

Page 23 1 And I was interested that -- you answered that 0. 2 you're not going to revise the setbacks to 1-to-100 feet. 3 Because I know you're up to \$13 million a well here, but, 4 you know, the new rule allows the 100 feet, and so... 5 Α. I guess what I did not have clarity on is, we applied -- given the time we originally applied for this, 6 7 the new rule was not in order. I quess what I don't know 8 is: In this situation where the Order comes to fruition 9 after the date of the new rules coming in if we are 10 allowed to change something to the new rules where we applied originally under the old rules. 11 12 Have you already applied for the non-standard Q. location --13 14 Α. Yes. 15 Q. -- applications? 16 Yes. Α. I don't want to speak out of turn 17 MS. BROGGI: if I'm wrong, but I think they have already been approved. 18 But you could always apply again. 19 MR. JONES: 20 I think you could do that simply by MR. BROOKS: filing an amended C-102, although I can't say the Division 21 is -- we had a big meeting about this subject, but I don't 22 think we reached -- as usually happens in meetings, I'm 23 24 not sure there was a clear decision. 25 MS. BRADFUTE: I did have a conversation with

the Deputy Director yesterday and the advice given was: 1 2 File an amended C-102. MR. BROOKS: Well, that's in accordance with my 3 4 understanding of the consensus, to the extent there was a 5 consensus reached, that if -- we cannot -- all we could do is grant or deny the non-standard location if it were 6 7 asked for. If we granted it then that would leave you in 8 about the same position as if we didn't grant it -- if we 9 didn't do anything. And if we denied it, that would just 10 cause confusion. So... 11 MS. BRADFUTE: I agree. 12 MR. JONES: I just have two more questions. 13 And I know this needs to be explored further, Q. 14 but the Wishbone pool is an oil pool, is that correct? 15 Α. Correct. So it's got 40-acre building blocks. But we 16 0. 17 don't worry about that because we are -- well, we do 18 because it's under the old rule, but I just want to make 19 sure. Because sometimes we say we've got a pool but -and it's understood that it's an oil pool in the southeast 20 21 if it doesn't say gas, but, you know, we've got these different building blocks now. 22 So... 23 And who is your major working interest 24 owners that were nonconsenting so far, the big owners that 25 have not joined?

PAUL BACA PROFESSIONAL COURT REPORTERS 500 FOURTH STREET NW - SUITE 105, ALBUQUERQUE, NM 87102

## Page 24

Page 25 Have not joined? There's Marathon, Oxy. 1 Α. Those are the two biggest ones. 2 3 The biggest? Okay. 0. 4 Α. Hold on. Let me... 5 It's 11 and 12. Bear with we me for a 6 second. 7 So okay, yeah. It's Marathon and Oxy. 8 Okay. Q. 9 Second is really Oxy. Α. 10 Okay. So this is quite a big bite to chew on if Q. you have to carry people on these wells, but I guess --11 12 it's a big bite for anybody to participate in, also. We're looking at \$65 million a spacing unit here, correct? 13 14 Α. Right. 15 Q. Something like it. 16 Α. We are. 17 And that's just for drilling the wells. That's 0. not the facilities. 18 Right. But I think the geologist can speak to 19 Α. 20 the confidence we have in this area. MR. JONES: Okay. I better let Mr. Brooks. 21 22 MR. BROOKS: Okay. 23 CROSS-EXAMINATION 24 BY MR. BROOKS: 25 I want to get some things straight here. **Q**.

Page 26 There's 10 wells total? 1 2 Α. Yes, sir. 3 Q. Exhibits 1 through 10 are they AFEs? 4 Α. Yes, sir. 5 MS. BROGGI: Not the AFEs, the C-102s. 6 C-102s. I'm sorry. Not the AFEs. I shouldn't Q. 7 get those things confused. 8 Are these -- what formations are these in? Are those Wolfcamp and Bone Spring, or --9 10 Α. Correct. 11 0. Are the 600 series Bone Spring and the 700 12 series Wolfcamp, or it some other way. 13 I believe that is the nomenclature, correct. Α. 14 0. That's what I was thinking it probably was, 15 but... So the 602, 601 -- 601, 602, 603, 604 --16 17 MS. BROGGI: No, that's not correct. 18 No, it's not correct? MR. BROOKS: 19 MS. BROGGI: No. 20 MR. BROOKS: Then let's get it correct. MS. BROGGI: No, it's a bit of a mixed batch. 21 22 If I'm understanding the question right, the cases are -- the wells are different on the first 23 24 601, 602, 701, 702, 703. case: 25 THE WITNESS: But I think what he's saying is

Page 27 does the use of a 6 means that you're drilling at Bone 1 Spring well versus a 7 which is at Wolfcamp. 2 3 MS. KESSLER: I'm sorry. I misunderstood the 4 question. 5 THE WITNESS: So yes, that's the system. 6 Q. (BY MR. BROOKS) So the 600 series? 7 Are Bone Spring wells. Α. 8 600 series are Bone Spring and 700 series are 0. Wolfcamp. 9 10 Α. Yes, sir. 11 MR. JONES: It's all a pool that has not been 12 formed yet. It's --MR. BROOKS: So these are wildcat? 13 14 MR. JONES: No, they're Wolfbone. I'm sorry, 15 David. 16 MR. BROOK: I need to know, though. I remember you did ask about Wolfbone. 17 18 MR. JONES: But I didn't ask him the vertical and lower limits of the Wolfbone. 19 20 MR. BROOKS: Okay. Since they're Wolfbone then it won't matter, from our perspective, what's Wolfcamp and 21 what's -- of course that's Paul's classification, but 22 Paul's classifications are usually sacred. 23 24 So I'm assuming that he will put them in a 25 wildcat Wolfbone pool.

Page 28 Is that what you contemplate or should I ask the 1 Q. 2 geologist that? I would defer to my colleague on that. 3 Α. 4 Q. Okay. Since it's not in an established pool we 5 can assume that it will be spaced on 40 acres, right? 6 Α. (Note: Nods head.) 7 And this was formed -- this application was Q. 8 filed -- these applications were filed before June 26th? 9 Correct. They were filed in April. Α. 10 MS. BROGGI: May. So we do need non-standard spacing units. 11 0. We 12 need to form non-standard spacing units, because we can't 13 have horizontal spacing units because they didn't exist 14 when these applications were filed. 15 Okay. Now, in regard to what you asked 16 about, I guess you were asked about it and you responded 17 that you didn't know how it did with regards to whether a 18 separate election has been allowed on each pool. So far 19 every such case we have dealt with we have allowed a separate election in both -- for each well. I will add, 20 21 however, that to my knowledge there has not been a case so 22 far in which any party specifically requested -- well, 23 there was a case in which a party specifically -- a 24 non-pooled -- non-applicant, a responding party 25 specifically requested a separate election and a delayed

Page 29 period of time to make that separate election. 1 That was 2 granted in that case but with the specification that it 3 applied to that case only, because it was based on the 4 evidence, and that wouldn't be a Division policy. 5 Division wasn't adopting any kind of policy, it simply 6 decided one case on the particular contentions and 7 evidence. 8 I do not know of any case in which the Division has announced a policy of either always having 9 10 separate elections or not always having separate elections. I can see that one can argue from the fact 11 12 that the statutory provision refers to "the well" that 13 that would require separate elections in every case, but I 14 do not know whether that's Division policy or not, and I 15 can see other arguments could be made. 16 So I will leave it at that. 17 But in the absence of a vigorous argument 18 for and testimony supporting the reasons for it that we 19 should no allow separate election, I suspect that there will not be a focus on it and therefore we will follow 20 21 what has become the default option for providing for 22 separate elections for each well. 23 MS. BROGGI: Thank you. 24 MR. BROOKS: Okay. I have no further questions 25 of this witness.

Page 30 (Note: Discussion held off the record. 1 Mr. 2 Brooks exited.) 3 MS. BROGGI: Are we operating under Mr. 4 Zollinger has been accepted as an expert witness? 5 MR. JONES: Yes. HENRY ZOLLINGER, 6 7 having been previously sworn and 8 qualified testified as follows: 9 DIRECT EXAMINATION BY MS. BROGGI: 10 11 0. What is the target pool for these 10 proposed 12 wells? 13 Α. The wolfbone pool. 14 Q. Have you prepared a structure map, a cross 15 section of the pool involved in these consolidated cases? 16 Α. Yes. 17 Q. Will you please turn to COG Exhibit No. 26. 18 Will you identify this for the examiner. 19 Α. This is the locator map for this 10-well 20 project. The dashed lines are the proposed wells, the purple lines represent the 600 series wells, and the red 21 22 lines represent the 700 series wells. The solid lines 23 also represent the produces wells in the area in the 24 Wolfbone pool. 25 How about the yellow highlighted area? Q.

Page 31 1 Α. That's COG's acreage. 2 Will you turn to the next exhibit, please, COG Q. 3 Exhibit No. 27, --4 Α. Yes. 5 -- and identify this for the examiner. 0. This is a structure map on the top of the 6 Α. 7 Wolfcamp which is representative for both landing points 8 in this project. 9 Is the structure consistent in this section? Q. 10 Α. These wells will be drilling on the structure, updip throughout the well -- I'm sorry, downdip. I always 11 12 get them... It's before lunch. 13 Q. 14 Have you observed any faults or pinchouts 15 or other geological hazards to a horizontal well here? 16 Α. No, I have not. 17 0. Will you turn to the next exhibit, No. 28, and 18 again will you identify this for the examiner. This is the same locator map with the line 19 Α. Yes. of section from A to A prime for the next exhibit. 20 21 Q. And why did you choose these three wells on the A to A prime line? 22 23 Α. These are representative of the targets for this project. 24 Will you turn to that final exhibit, COG Exhibit 25 0.

Page 32 1 No. 29 --2 Α. Yes. 3 -- and identify this. 0. 4 Α. This is the cross section which is 5 representative of the landing points for the targets in the Fascinator project. 6 7 The cross section is hung on the Wolfcamp, 8 the top of the Wolfcamp, which is the red flat line. The 9 Third Bone Spring top is noted above the Wolfcamp, and then an inner formational Wolfcamp marker below the 10 11 Wolfcamp top. Then the targets for what we call the sand 12 13 target, which is above the Wolfcamp top, and the shale 14 targets, which are below the Wolfcamp top, are denoted by the brackets on the left. 15 16 Based on you're geologic study of this area have 0. 17 you identified any geologic impediments to drilling a horizontal well in this area? 18 19 Α. No. 20 In your opinion, can this area be economically Q. developed by a horizontal well? 21 22 Α. Yes. 23 Q. In your opinion will these quarter/quarter 24 sections contribute more or less equally in these spacing 25 units?

Page 33 1 Α. Yes. 2 (Note: Reporter interruption.) 3 In your opinion will horizontal drilling be the 0. 4 most efficient method to develop this acreage to prevent 5 the drilling of unneccessary wells and result in the 6 greatest ultimate recovery? 7 Α. Yes. 8 And finally, in your opinion will the granting 0. of COG's two applications in these consolidated cases be 9 10 in the best interests of of conservation, prevention of waste, and protection of correlative rights? 11 12 Α. Yes. 13 Were Exhibits, were COG Exhibits 26 through 29 Q. 14 either prepared by you or compiled under your direction 15 and supervision? 16 Α. Yes. MS. BROGGI: At this time we would move for the 17 admission of COG Exhibits 25 (sic) through 29. 18 19 MR. JONES: In both cases? Those are just consolidated cases. Okay. 20 21 Any objection? 22 MS. BRADFUTE: No. 23 MR. BRUCE: No objection. 24 MR. JONES: Exhibits 26 through 29 are admitted. 25 . BROGGI: And that concludes my direct

Page 34 examination of this witness. 1 2 MS. BRADFUTE: I just have one or two questions. I wanted to look at Exhibit 29. 3 THE WITNESS: Okay. 4 5 CROSS-EXAMINATION 6 BY MS. BRADFUTE: 7 When I look at this cross section there is an Q. 8 orange line running through the cross section about halfway through the chart --9 10 Α. Yes. 11 -- that's labeled WFMP. 0. 12 Α. Correct. 13 I just missed this in your testimony. What does Q. 14 that line show? 15 Α. That line shows the top of the Wolfcamp. Okay. And so the target here for these wells is 16 Q. 17 shown by a green bracket, that first -- the higher green bracket shown in the exhibit? 18 For the 600 series, yes. 19 Α. And then the lower green bracket is target for 20 Q. the 700 series? 21 22 Yes, ma'am. Α. 23 Q. How many feet apart are those two targets? 24 Α. They are about -- the bottom of the upper 25 bracket and the top of the lower bracket are about 100

Page 35 1 foot apart. 2 Q. And how far apart spaced laterally are your 600 3 series wells? 4 Α. I'll have to refer back to the C-102s for that. 5 Okay. So you wouldn't have an estimate for --0. 6 Α. I have an idea. I'd just like to give a correct 7 answer. 8 Q. I don't need exact numbers. I was looking for 9 an estimate. A. Estimate would be around 500. 10 Q. Around 500 feet? 11 12 Do you know as an estimate how far apart 13 spaced the 700 series wells are? 14 Α. The 700 series wells will actually be staggered 15 inside that landing zone target bracket. So horizontally in the same stratographic depth, they will be similar to 16 the 600 series, about 500 feet. 17 18 And then they are staggered. How does that Q. 19 work? They will be equally staggered, so half of that 20 Α. 21 distance. 22 MS. BRADFUTE: Okay. Thank you. That concludes 23 my questions. 24 MR. JONES: Mr. Bruce? 25 MR. BRUCE: You just you mentioned -- let's get

Page 36 1 to your last point first. 2 CROSS-EXAMINATION BY MR. BRUCE: 3 4 Q. So the shale target, you're looking at close to 5 be about 150 feet thick, roughly? 6 Α. Roughly, yes. 7 And you stagger them. What is the vertical? Q. 8 Α. It will be about another 100 feet. On the order 9 of 100 feet. 10 Q. Just approximate? 11 Α. Yes. 12 So if COG had a full section here you would be Q. 13 looking at a dozen Wolfcamp wells across the section and 14 eight Bone Spring Sand wells? 15 A. Correct. 16 MR. BRUCE: Thanks. 17 MR. JONES: Okay. 18 CROSS-EXAMINATION BY MR. JONES: 19 Okay. Can you define the top and bottom of 20 Q. 21 wolfbone pool? 22 Not off this cross section. However, the base Α. of the Wolfbone pool is on this. It's actually marked 23 24 with WFMP under bar B down at the bottom. And the top is 25 actually the base of the Second Bone Spring sand or the

Page 37 1 top of that carbonate. 2 And that has been consistent with other Q. 3 definitions of the Wolfbone pool? 4 Α. Yes, sir. 5 In other cases? 0. Yes, sir. 6 Α. 7 And this is the way it was advertised to all the Q. 8 parties, is the depths were specified, vertical depths 9 were specified, so... 10 And it was also specified it was going to be in the Wolfbone pool? 11 12 Α. Yes, sir. 13 Okay. Looks like the, uh -- just to belabor the Q. 14 point here, looks like the Wolfcamp, you're picking it on 15 your -- you increased activity in your gamma ray and your -- it looks like your deep resistivity is pretty much 16 17 a good marker, too. 18 Yes, sir. Α. 19 0. Is that because of the lower porosity? It's a lithology change from the Bone Spring --20 Α. the Bone Spring Sand above to that which we call the First 21 22 Wolfcamp shale below the Bone Spring. 23 Q. But you would consider these two intervals to be 24 all one common source of supply? 25 Α. They each have resource, and the reason we are

Page 38 drilling all these wells together is to most effectively 1 2 drain that resource. 3 Okay. But you are not drilling right -- you 0. 4 didn't pick a target right between these green brackets. 5 Α. No, sir. 6 Q. But your frac jobs, will they communicate 7 between? 8 Α. Yes, sir. 9 Okay. So it will communicate. Q. 10 And so you don't know how far laterally these wells will be spaced. 11 12 Α. I believe it's about 500 feet. I can take a 13 look at that. 14 0. Okay. 15 Α. Yeah. And your engineers are still -- you don't have 16 Q. 17 an engineer today, but your engineers are still upbeat 18 about the really tight increased density --19 Α. Yes, sir. -- wells? And you're going to frac them all, 20 Q. 21 kind of a zipper frac? 22 Not necessarily zipper frac, but simultaneously, Α. 23 yes. 24 And you will put them on line at the same time? Q. I'm not sure what the production method is going 25 Α.

Page 39 to be. That is the preferred method. That's going to 1 2 come down to takeaway and facilities whether or not we are 3 able to bring them all on at once. 4 But, yes, they will be closely brought on 5 at the same time. 6 Q. Are you able to -- the time between spudding 7 your first well and completing at least one well, is that 8 going to meet the 120-day limit we usually put in the 9 compulsory pooling, or do you want to ask for an increased 10 time? 11 I believe we would want to ask for an increased Α. 12 time on that. 13 How much increased time? Q. 14 Α. I'm not sure. I would have to look at that and get back to you. I know these pads are set up as 15 two-to-three well pads, and it's going to take roughly 45 16 days per well to drill that. So we would need a little 17 more time. 18 19 0. You're going to need more time. 20 Α. Yes. 21 So I think you probably need to go back to talk Q. 22 to some people and get back with us on that. 23 That's not part of your application but 24 you've got parties represented here by other attorneys. 25 Do you have any objection to them

Page 40 1 submitting an increased time later? 2 MS. BRADFUTE: Jennifer Bradfute for Marathon. We would not have any position on increased time if they 3 submit their information, and in prior cases the Division 4 5 has said up to a year. 6 MR. JONES: Up to a year? 7 MS. BRADFUTE: Add a year. 8 MR. JONES: Okay. So that wouldn't impair 9 anybody's correlative rights or tie up their money too 10 long? That is a lot of money to be tied up for a long time, but if you don't have a choice, you don't have a 11 12 choice. 13 So if you are going to do this method, then 14 you got to have some time to get it done. 15 THE WITNESS: Yes, sir. 16 MR. JONES: So I don't know if you want to --17 MS. BROGGI: Could we request that year, and then if the Division needs additional information we can 18 do that? 19 MR. JONES: Okay. So one year between the time 20 the first well is spud to the time the -- one of the wells 21 22 is completed or begins producing, I guess is the language, I think. 23 24 MS. BROGGI: Yes, please. 25 MR. JONES: Objection to that?

Page 41 1 MR. BRUCE: No. 2 I was just going to ask a follow-up question. 3 MR. JONES: Go ahead. 4 5 FURTHER CROSS-EXAMINATION BY MR. BRUCE: 6 7 Are you going to drill all the wells Q. 8 sequentially and then come back and --9 Not sequentially. Since they are on four Α. 10 separate pads, I'm not sure what the timing is going to be for spud on all of those at this point, just due to 11 12 operational uncertainty. So they will be batch drilled 13 where we will drill the verticals on all of the wells on 14 the pad, change over our mud system and then drill the horizontals on all the wells, and backwards. That way we 15 can keep the wellbores as stable as possible and not have 16 to continually switch out the mud system, which is very 17 inefficient to do it that way. 18 That's the only thing I know about the 19 20 order at this point. 21 Q. I'm not asking specifics but I presume you were not going to to drill and complete one well. 22 23 No, we will have them all drilled before one is Α. 24 completed. 25 FURTHER CROSS-EXAMINATION

Page 42 BY MR. JONES: 1 2 So four pads? Where would you -- is that 0. concerning these two cases or is that including some other 3 4 offsets? 5 Α. If you look back at Exhibit 28, the squares at the north end of the dashed lines, those would represent 6 7 where those pads would be located. 8 MR. JONES: Okay. There's four pads there. 9 Okay. Anything else you want to add before 10 you move off to Texas and eat barbecue in Austin? We don't have that here, I don't think. 11 12 MR. SOLOMON: No. 13 MR. JONES: Okay. Any other questions? 14 MS. BROGGI: We would ask at this time that Cases 16219 and 16220 be taken under advisement. 15 16 MR. JONES: Okay. I'm a little concerned about 17 adding the one year in when the compulsory drilling people were not -- had that advertised, but I think everyone 18 understands there's no way you can do this whole process 19 without the time period. And we've two attorneys that are 20 not objecting, representing some of the biggest pooled 21 22 parties here, potentially pooled parties. 23 Okay. Cases 16219 and 16220 are taken 24 under advisement. Let's break until 1:30. 25 (Time noted: 11:54 a.m.)

|    | Page 43   |
|----|---|
| 1  | STATE OF NEW MEXICO )   |
| 2  | ) SS  |
| 3  | COUNTY OF TAOS )  |
| 4  |   |
| 5  | REPORTER'S CERTIFICATE  |
| б  | I, MARY THERESE MACFARLANE, New Mexico Reporter                     |
| 7  | CCR No. 122, DO HEREBY CERTIFY that on Thursday, July 26,           |
| 8  | 2018, the proceedings in the above-captioned matter were            |
| 9  | taken before me; that I did report in stenographic                  |
| 10 | shorthand the proceedings set forth herein, and the                 |
| 11 | foregoing pages are a true and correct transcription to             |
| 12 | the best of my ability and control.                                 |
| 13 | I FURTHER CERTIFY that I am neither employed by                     |
| 14 | nor related to nor contracted with (unless excepted by the          |
| 15 | rules) any of the parties or attorneys in this case, and            |
| 16 | that I have no interest whatsoever in the final                     |
| 17 | disposition of this case in any court.                              |
| 18 |   |
| 19 |   |
| 20 | MARY THERESE MACFARLANE, CCR<br>NM Certified Court Reporter No. 122 |
| 21 | License Expires: 12/31/2018   |
| 22 |   |
| 23 |   |
| 24 |   |
| 25 |   |
|    |   |
|    |   |